

What Is Claimed Is:

1. An arcuate architectural component adapted for inclusion in an architectural structure, the arcuate architectural component comprising:

5 a flexible outer board that upon being bent forms a curved first outer surface of the arcuate architectural component, said flexible outer board including tongue-and-groove tracks formed along opposite longitudinal edges thereof;

10 a flexible inner board that upon being bent forms a curved second outer surface of the arcuate architectural component, said flexible inner board including tongue-and-groove tracks formed along opposite longitudinal edges thereof;

15 a first plurality of arcuate tiles that are adapted to be arranged for forming a third outer surface of the arcuate architectural component which spans between a longitudinal edge of said flexible outer board and a longitudinal edge of said flexible inner board, each of said first plurality of arcuate tiles having formed along peripheral edges thereof:

20 an arcuate first tongue-and-groove that is adapted to mate and lock with a portion of the tongue-and-groove track of said flexible outer board; and

an arcuate second tongue-and-groove that is adapted to mate and lock with a portion of the tongue-and-groove track of said flexible inner board;

whereby said first plurality of arcuate tiles, when all mated and  
25 locked with the tongue-and-groove tracks of said flexible outer board and with said flexible inner board form the third outer surface of the arcuate architectural component, said first plurality of arcuate tiles constraining the mating tongue-and-groove tracks of said flexible outer board and of said  
30 flexible inner board into an arcuate shape; and

a second plurality of arcuate tiles that are adapted to be arranged for forming a fourth outer surface of said flexible outer board which spans between a longitudinal edge of said flexible outer board and a longitudinal edge of said flexible inner board,  
35 each of said second plurality of arcuate tiles having formed along peripheral edges thereof:

an arcuate first tongue-and-groove that is adapted to mate and lock with a portion of the tongue-and-groove track of said flexible outer board; and

40 an arcuate second tongue-and-groove that is adapted to mate and lock with a portion of the tongue-and-groove track of said flexible inner board;

whereby said second plurality of arcuate tiles, when all mated and locked with the tongue-and-groove tracks of said flexible outer

45 board and with said flexible inner board form the fourth outer surface of the arcuate architectural component, said second plurality of arcuate tiles constraining the mating tongue-and-groove tracks of said flexible outer board and of said flexible inner board into an arcuate shape.

2. The arcuate architectural component of claim 1 wherein:  
said first plurality of arcuate tiles have a third tongue-and-groove formed along a peripheral edge thereof which spans between the first and the second tongue-and-grooves of said  
5 tiles, when said first plurality of arcuate tiles are assembled into said arcuate architectural component the third tongue-and-grooves of immediately adjacent tiles mating and locking together; and

said second plurality of arcuate tiles have a third  
10 tongue-and-groove formed along a peripheral edge thereof which spans between the first and the second tongue-and-grooves of said tiles, when said second plurality of arcuate tiles are assembled into said arcuate architectural component the third tongue-and-grooves of immediately adjacent tiles mating and locking  
15 together.

3. The arcuate architectural component of claim 1 wherein pairs of tiles, a first tile of each pair belonging to said first

plurality of arcuate tiles and a second tile of each pair belonging to said second plurality of arcuate tiles, are formed as mirror  
5 images.

4. The arcuate architectural component of claim 1 wherein:  
said flexible outer board also includes a series of serrulate slots that extend well into said flexible outer board, the slots extending transversely across said flexible outer board between the  
5 tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible outer board; and

said flexible inner board also includes a series of serrulate slots that extend well into said flexible inner board, the slots extending transversely across said flexible inner board between the  
10 tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible inner board.

5. The arcuate architectural component of claim 1 wherein said flexible outer board, said flexible inner board, said first plurality of arcuate tiles and said second plurality of arcuate tiles are all formed from a solid plastic, wood-alternative  
5 material.

6. An arcuate architectural component adapted for inclusion in an architectural structure, the arcuate architectural component comprising:

a plurality of flexible boards each of which includes  
5 tongue-and-groove tracks formed along opposite longitudinal edges thereof, each tongue-and-groove track of each flexible board being adapted to mate together with and lock with one of the tongue-and-groove tracks formed along the longitudinal edge of the immediately adjacent flexible board when said flexible boards are  
10 assembled to form said second arcuate architectural component;

whereby when said flexible boards are bent parallel to the tongue-and-groove tracks thereof and tongue-and-groove tracks of all flexible boards are all mated and locked with the tongue-and-groove tracks of immediately adjacent flexible boards  
15 the assembled flexible boards form a column.

7. The arcuate architectural component of claim 6 wherein said flexible boards also include a series of serrulate slots that extend well into said flexible boards, the slots extending longitudinally along said flexible board between the  
5 tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible boards.

8. The arcuate architectural component of claim 6 wherein said flexible boards are formed from a solid plastic, wood-alternative material.

9. An architectural structure that includes an arcuate component, the arcuate architectural component comprising:

a flexible outer board that upon being bent forms a curved first outer surface of the arcuate architectural component, said  
5 flexible outer board including tongue-and-groove tracks formed along opposite longitudinal edges thereof;

a flexible inner board that upon being bent forms a curved second outer surface of the arcuate architectural component, said flexible inner board including tongue-and-groove tracks formed  
10 along opposite longitudinal edges thereof;

a first plurality of arcuate tiles that are adapted to be arranged for forming a third outer surface of the arcuate architectural component which spans between a longitudinal edge of said flexible outer board and a longitudinal edge of said flexible inner  
15 board, each of said first plurality of arcuate tiles having formed along peripheral edges thereof:

an arcuate first tongue-and-groove that is adapted to mate and lock with a portion of the tongue-and-groove track of said flexible outer board; and

20           an arcuate second tongue-and-groove that is adapted to  
mate and lock with a portion of the tongue-and-groove track of  
said flexible inner board;

whereby said first plurality of arcuate tiles, when all mated and  
locked with the tongue-and-groove tracks of said flexible outer  
25 board and with said flexible inner board form the third outer  
surface of the arcuate architectural component, said first  
plurality of arcuate tiles constraining the mating  
tongue-and-groove tracks of said flexible outer board and of said  
flexible inner board into an arcuate shape; and

30           a second plurality of arcuate tiles that are adapted to be  
arranged for forming a fourth outer surface of said flexible outer  
board which spans between a longitudinal edge of said flexible  
outer board and a longitudinal edge of said flexible inner board,  
each of said second plurality of arcuate tiles having formed along  
35 peripheral edges thereof:

an arcuate first tongue-and-groove that is adapted to  
mate and lock with a portion of the tongue-and-groove track of  
said flexible outer board; and

40           an arcuate second tongue-and-groove that is adapted to  
mate and lock with a portion of the tongue-and-groove track of  
said flexible inner board;

whereby said second plurality of arcuate tiles, when all mated and  
locked with the tongue-and-groove tracks of said flexible outer

board and with said flexible inner board form the fourth outer  
45 surface of the arcuate architectural component, said second  
plurality of arcuate tiles constraining the mating  
tongue-and-groove tracks of said flexible outer board and of said  
flexible inner board into an arcuate shape.

10. The architectural structure that includes an arcuate  
component of claim 9 wherein:

said first plurality of arcuate tiles have a third  
tongue-and-groove formed along a peripheral edge thereof which  
5 spans between the first and the second tongue-and-grooves of said  
tiles, when said first plurality of arcuate tiles are assembled  
into said arcuate architectural component the third  
tongue-and-grooves of immediately adjacent tiles mating and locking  
together; and

10 said second plurality of arcuate tiles have a third  
tongue-and-groove formed along a peripheral edge thereof which  
spans between the first and the second tongue-and-grooves of said  
tiles, when said second plurality of arcuate tiles are assembled  
into said arcuate architectural component the third  
15 tongue-and-grooves of immediately adjacent tiles mating and locking  
together.



11. The architectural structure that includes an arcuate component of claim 9 wherein pairs of tiles, a first tile of each pair belonging to said first plurality of arcuate tiles and a second tile of each pair belonging to said second plurality of  
5 arcuate tiles, are formed as mirror images.

12. The architectural structure that includes an arcuate component of claim 9 wherein:

said flexible outer board also includes a series of serrulate slots that extend well into said flexible outer board, the slots  
5 extending transversely across said flexible outer board between the tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible outer board; and

said flexible inner board also includes a series of serrulate slots that extend well into said flexible inner board, the slots  
10 extending transversely across said flexible inner board between the tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible inner board.

13. The architectural structure that includes an arcuate component of claim 9 wherein said flexible outer board, said flexible inner board, said first plurality of arcuate tiles and said second plurality of arcuate tiles are all formed from a solid  
5 plastic, wood-alternative material.

14. The architectural structure that includes an arcuate component of claim 9 further comprising a second arcuate architectural component, the second arcuate architectural component including:

5 a plurality of flexible boards each of which includes tongue-and-groove tracks formed along opposite longitudinal edges thereof, each tongue-and-groove track of each flexible board being adapted to mate together with and lock with one of the tongue-and-groove tracks formed along the longitudinal edge of the  
10 immediately adjacent flexible board when said flexible boards are assembled to form said second arcuate architectural component;

whereby when said flexible boards are bent parallel to the tongue-and-groove tracks thereof and tongue-and-groove tracks of all flexible boards are all mated and locked with the  
15 tongue-and-groove tracks of immediately adjacent flexible boards the assembled flexible boards form a column.

15. The architectural structure that includes an arcuate component of claim 14 wherein said flexible boards also include a series of serrulate slots that extend well into said flexible boards, the slots extending longitudinally along said flexible  
5 board between the tongue-and-groove tracks formed along opposite

longitudinal edges thereof to facilitate bending of said flexible boards.

16. The architectural structure that includes an arcuate component of claim 14 wherein said flexible boards are formed from a solid plastic, wood-alternative material.

17. An architectural structure that includes an arcuate component, the arcuate architectural component comprising:

a plurality of flexible boards each of which includes tongue-and-groove tracks formed along opposite longitudinal edges thereof, each tongue-and-groove track of each flexible board being adapted to mate together with and lock with one of the tongue-and-groove tracks formed along the longitudinal edge of the immediately adjacent flexible board when said flexible boards are assembled to form said arcuate architectural component;

whereby when said flexible boards are bent parallel to the tongue-and-groove tracks thereof and tongue-and-groove tracks of all flexible boards are all mated and locked with the tongue-and-groove tracks of immediately adjacent flexible boards the assembled flexible boards form a column.

18. The architectural structure that includes an arcuate component of claim 17 wherein said flexible boards also include a

series of serrulate slots that extend well into said flexible boards, the slots extending longitudinally along said flexible board between the tongue-and-groove tracks formed along opposite longitudinal edges thereof to facilitate bending of said flexible boards.

19. The architectural structure that includes an arcuate component of claim 17 wherein said flexible boards are formed from a solid plastic, wood-alternative material.